



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0851-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use as many sheets as necessary)**Complete if Known**

Application Number	10/804,513
Filing Date	March 19, 2004
First Named Inventor	Zhang, et al.
Art Unit	1751
Examiner Name	
Attorney Docket Number	06293P3 USA

Sheet	1	of	1
-------	---	----	---

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
<i>m</i>		JP2004184648A	07-02-2004	Kobayashi Masakazu		✓
<i>m</i>		WO 2004/051379	06-17-2004	Clariant Int'l Ltd.		

Examiner Signature	<i>[Signature]</i>	Date Considered	10/11/06
-----------------------	--------------------	--------------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known			
		Application Number			
		Filing Date			
		First Named Inventor	Peng Zhang, et al.		
		Art Unit			
		Examiner Name			
Sheet	1	of	2	Attorney Docket Number	06293P3 USA

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 2002/0055660 A1	5/9/2002	K. R. Lassila, et al.	
		US- 2002/0115022 A1	8/22/2002	S. A. Messick, et al.	
		US- 5,127,571	7/7/1992	B. L. Gutierrez, et al.	
		US- 5,948,464	9/7/1999	F. M. Delnick	
		US- 5,977,041	11/2/1999	K. Honda	
		US- 6,152,148	11/28/2000	A. M. George, et al.	
		US- 6,313,182 B1	11/6/2001	K. R. Lassila, et al.	
		US- 6,670,107 B2	12/30/2003	J. F. Lachowski	
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
		EP 1 115 035 A1		Europe		✓
		JP 95142349A		Japan		✓
		JP 96008163A		Japan		✓
		WO 00/03306		World		✓
		WO 02/23598 A2		World		✓
		WO 87/03387		World		✓
		WO 99/15609		World		✓
		WO 99/60083		World		✓
		WO 99/60448		World		✓

Examiner Signature		Date Considered	10/12/06
--------------------	--	-----------------	----------






*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.


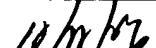
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known			
		Application Number			
		Filing Date			
		First Named Inventor	Peng Zhang, et al.		
		Art Unit			
Examiner Name					
Sheet	2	of	2	Attorney Docket Number	06293P3 USA

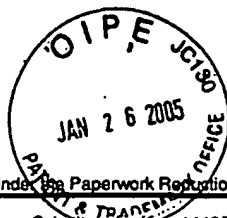
NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		W. D. Domke, et al., "Pattern Collapse in High Aspect Ratio DUV and 193nm Resists," Proc. SPIE-Int. Soc. Opt. Eng. 3999, 313-321, 2000.	✓
		C. Cheung, et al., "A Study of a Single Closed Contact for 0.18 Micron Photolithography Process," Proc. SPIE-Int. Soc. Opt. Eng. 3998, 738-741, 2000.	✓
		S. Hien, et al., "Collapse behavior of single layer 193 and 157 nm resists: Use of surfactants in the rinse to realize the sub 130 nm nodes," Infineon Technologies, International SEMATECH, Center for Nano Technology, University of Wisconsin.	✓
		T. Tanaka, et al., "Mechanism of Resist Pattern Collapse During Development Process," Jpn. J. Appl. Phys. Vol. 32 (1993), pp. 6059-6064, Part 1, No. 12B.	✓
		P. Zhang, et al., "Surface Conditioning Solutions to Reduce Resist Line Roughness," Air Products and Chemicals, Inc., SPIE International Symposium Microlithography, February 22-27, 2004, Santa Clara, CA.	✓

Examiner Signature		Date Considered	
--------------------	---	-----------------	---

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0851-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	10/804,513
				Filing Date	March 19, 2004
				First Named Inventor	Zhang, et al.
				Art Unit	1751
Examiner Name					
Sheet	1	of	1	Attorney Docket Number	06293P3 USA

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
<i>JS</i>		US- 6,261,745	07-17-2001	Komano Hiroshi, et al.	
		US- 5,977,041	11-02-1999	Honda Kenji	
<i>JS</i>		US- 5,756,267	05-26-1998	Kobayashi Kesanao, et al.	
<i>JS</i>		US- 5,650,543	07-22-1997	Medina Steven Wayne	
<i>JS</i>		US- 4,833,067	05-23-1989	Asaumi Shingo, et al.	
<i>JS</i>		US- 2002/016272	02-07-2002	Kakizawa Masahiko, et al.	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
<i>JS</i>		EP 1 115 035 A	07-11-2001	Air Products and Chemicals, Inc.		✓
<i>JS</i>		EP 1 389 745 A	02-18-2004	Air Products and Chemicals, Inc.		✓

Examiner Signature	<i>[Signature]</i>	Date Considered	10/11/06
-----------------------	--------------------	--------------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-788-9199) and select option 2.



PTO/SB/08A (08-03)

Approved for use through 07/31/2008. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use as many sheets as necessary)**Complete if Known**

Application Number	10/804,513
Filing Date	03/19/2004
First Named Inventor	Zhang
Art Unit	1751
Examiner Name	
Attorney Docket Number	06293P3 USA

Sheet	1	of	2
-------	---	----	---

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
<i>W</i>		US- 6,261,745	07/17/2001	Tanabe, et al.	
<i>W</i>		US- 2002/016272	02/07/2002	Kakizawa, et al.	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
<i>W</i>		EP 1 389 746 A2	02/18/2004	Zhang, et al.		✓
<i>W</i>		EP 1 389 745 A1	02/18/2004	Zhang, et al.		✓
<i>W</i>		EP 1 115 033 A1	07/11/2001	Lassila, et al.		✓
<i>W</i>		EP 1 245 650 A2	10/02/2002	Meier, et al.		✓
<i>W</i>		EP 1 115 035 A1	07/11/2001	Lassila, et al.		✓
<i>W</i>		EP 0 671 662 A1	09/13/2005	Suzuki		✓
		01088547 (abstract only)	04/03/1989	Mitsubishi		✓

Examiner Signature	<i>[Signature]</i>	Date Considered	12/11/06
--------------------	--------------------	-----------------	----------


*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 If possible. ⁶Applicant is to place a check mark here if English language Translation is attached.


This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/804,513
				Filing Date	03/19/2004
				First Named Inventor	Zhang
				Art Unit	1751
				Examiner Name	
Sheet	2		2	Attorney Docket Number	06293P3 USA

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		TOSHIHIKO TANAKA, et al.; "Mechanism of Resist Pattern Collapse during Development Process"; Japanese Journal of Applied Physics; December 1993; page 6061, column 2, paragraph 2; Vol. 32; JP Physical Society of Japan, Tokyo	✓

Examiner Signature		Date Considered	10/11/06
--------------------	---	-----------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.